

Abstract

5 For synchronization purposes, a transmitter (TX) multiplexes a pilot carrier with
carriers whereon data elements (DATA) are modulated, and transmits the pilot carrier
together with the modulated carriers to a receiver (RX). The immunity of the pilot carrier for
interferers, such as radio amateur signals, is improved by modulating the pilot carrier with a
non-constant signal, for instance a random signal, an alternating signal or even scrambled
10 data elements (DATA), before transmission thereof. Since demodulation of the pilot carrier
in the receiver (RX) and averaging successive demodulated pilot carriers reduces the effect of
the interference induced on the non-constantly modulated pilot carrier, the degradation of the
synchronization between transmitter (TX) and receiver (RX) is reduced significantly.

TOP SECRET//NOFORN